REMARKS

This Response is submitted·in answer to the Office Action mailed on May 6, 2004. Claims 1 - 27 are pending, and all stand rejected at present. Claims 28 - 30 are added. The fee may be billed to Deposit Account 14 - 0225, NCR Corporation.

DESCRIPTION OF ONE EMBODIMENT

Applicant will briefly describe one embodiment of the invention.

In one embodiment, the invention utilizes a generic web browser, called a "conventional browser" on page 2, line 17, of the Specification, as an interface for a customer at an ATM, Automated Teller Machine. The software package known as "Internet Explorer," available from Microsoft Corporation, provides one example of a conventional browser.

Using the web browser provides several advantages, including the facts that

> 1) the effort to design the browser was undertaken by a third party, and the ATM owner need not "re-invent the wheel," so to speak, by designing an equivalent system from scratch;
>
> 2) customers are familiar with such browsers, through usage of the Internet; and

3) the browsers have been extensively tested,

bugs have been worked out, and they are thus

very robust.

However, some issues arise in adapting the browser to use in an ATM, partly because the browser is designed to operate in another environment, namely, in surfing the Internet. ATMs present some different requirements.

One issue can be explained by way of example. Assume a browser loads a web page from a web site on the Internet, such as a table of contents for a catalog. When the user clicks onto an entry in the table, such as "men's shoes," the browser may return to the web site, to fetch a listing, or sub-table, which lists particular types of shows, such as "dress shoes, sports shoes, casual shoes, etc." The user can select entries from the sub-list, and see further information about the listed shoes.

However, after the user clicks on "men's shoes," the user may jump to another web page, before the sub-table arrives. Or, after the sub-table arrives, the user jumps to another web page. In either case, with many browsers, the sub-table becomes lost.

That is, the sub-table, upon arrival, is only displayed if the page calling for the sub-table is still in existence. If not, the sub-table is discarded. And if the page is dropped, as when the user jumps to another web page, the sub-table is also discarded.

When the browser is used in an ATM, this type of problem

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becomes relevant, as the following example will show. Assume that the browser at the ATM calls up a log-in page, wherein the customer enters a PIN number. If the PIN number is correct, then the browser will advance to another page, and the log-in page disappears.

But because of the design of many browsers, the PIN disappears too. If the PIN is needed for a later stage in the transaction, it must somehow be retrieved.

In more general terms, the display screens which are shown to the customer take the form of web pages which are stored locally within an ATM. The web pages can be written in what is called HTML, or Hypertext Markup Language.

During a transaction, a sequence of pages is displayed to the customer, and different events occur. For example, on one page, the customer may request that currency be dispensed, such as one hundred dollars. In response to the request, code will be called up which activates the dispenser mechanism, and the dispenser may return a dispense signal stating that the currency was successfully dispensed. Also, the dispenser may detect whether the currency was physically withdrawn by the customer, or left in place, and issue a removal signal accordingly.

The invention does not rely on the individual pages to handle the dispense and removal signals because, as explained above, if a page is not active when the signal arrives, the signal is lost.

That is, if the customer requested a withdrawal, and then moved to another page before the dispense and removal signals arrived, those signals would be lost. Other software which relies on those signals would then perhaps not function properly.

Instead, the invention creates an intermediate agent, called a "passthrough object," which handles the situation, and records the signals received.

The discussion just given will be explained in terms of claim 1, which is set forth below, with comments added, in parenthetical **Times Roman Bold Type**:

1.   Data processing apparatus having processing means, memory means and display means, wherein

said processing means performs a process in response to program instructions read from said memory means via dynamically linked operational objects called by control objects, such that events are returned back to a calling control object;

("Processing means" can refer to the microprocessor in a computer. "Control objects" and "operational objects" can refer to "buttons" on a page, which the user actuates, and which cause code to be executed.)

a plurality of pages are defined in a mark-up language that are selectively displayed and executed by a controlled browser;

(For example, the pages are stored locally, the mark-up language (1) determines how the pages are displayed, as by controlling formatting, and (2) allows the "buttons," also called "links" to be embedded in the pages.)

said controlled browser is controlled by a controlling container object;

active control objects for calling said operational objects are contained within said container object;

(For example, the buttons displayed on the pages, and the codes which the buttons call when actuated, are contained in the container object.)

a single pass-through object is created;

(Note that a "single" pass-through object is created.)

at least one of said pages includes a page embedded control object configured to call said passthrough object;

(For example, when a button is pressed, the passthrough object is called.)

an initiating one of said page embedded objects calls said passthrough object and passes to said passthrough object output information detailing a desired call to a specified operational object;

(For example, rather than calling an "operational object" directly when a button is pressed, the desired "operational object" is identified to the passthrough object. The passthrough object then calls the operational object.)

said passthrough object interprets output information received from a page embedded object to generate a call to a contained object that in turn calls the desired operational object; and

(Again, the passthrough object acts as an intermediary.)

said passthrough object receives event data from a called operational object and returns input data to said initiating embedded object indicative of said returned event.

(Again, the passthrough object acts as intermediary.)

In addition, although claim 1 does not emphasize this, the passthrough object can store data, such as data generated by the called code, or object, in a buffer. (See Specification, page 9, line 6 et seq.) Thus, if a page which initiated a call is not longer displayed, the returned data is not lost.

DISCUSSION OF CLAIM REJECTIONS

All claims were rejected as obvious, based on Shima. However, an examination of Shima, particularly Figures 13A - C and column 20, line 45 et seq., indicate that Shima is completely different from the claimed invention.

Shima Reference

Shima states that many people have different media devices, such as VCRs, video cameras, etc. (Column 1, lines 26 - 34.)

Shima proposes a system wherein a representation of the control panel of each device is stored within a computer, or other device. So numerous control panels are stored, one for each device. When the user wants to operate a particular device, the representation of the control panel for that device is retrieved. (Figure 9, blocks 712 and 714.)

Then, the representation is displayed, as on a Digital

Television, DTV, in Shima's Figure 13A. The user can use a REMOTE
to move a cursor on the displayed control panel, to thereby actuate
buttons on the displayed control panel, to thereby operate the
selected device, which is a VHS recorder in Figure 13A.

Shima refers to the representations of the control panels, and
possibly also the system which displays them, as "panel subunits."

Application to Claim 1

Point 1

The PTO admits that Shima fails to show the claimed "browser,"
"pages" and "pages in mark-up language." The PTO then argues that
it is obvious to add these elements to Shima.

However, those elements have not been shown in the prior art.
MPEP § 2143.03 states:

> To establish prima facie obviousness . . . **all
> the claim limitations** must be taught or
> suggested by the prior art.

Merely asserting that such elements are obvious is
insufficient.

Point 2

The rejection, as a technical matter, is faulty. The
rejection merely asserts that it is "obvious to extend Shima's
system to include" the missing elements. (Office Action, page 4,

second paragraph.)

However, merely including those elements in Shima's system does not necessarily show claim 1. For example, where are the added "pages" placed in Shima's system ?

Stated another way, the PTO has merely set forth the naked conclusion that, if Shima is "extended," then claim 1 is found. That is insufficient under section 103.

Point 3

This is a type of extension of Point 2.

Claim 1 recites:

> said controlled browser is controlled by
> a controlling container object.

Even if Shima is "extended" to include "pages" and a "browser," it has not been shown how that extension would include this recitation.

Again, all claim recitations must be shown.

Point 4

This Point applies a similar principle to that of Point 3.

Claim 1 recites:

> at least one of said pages includes a
> page embedded control object configured to
> call said passthrough object.

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The PTO has not shown that the "pages" which it adds to Shima have this claimed property.

Therefore, as so far explained, even if Shima is modified as suggested by the PTO, at least four claim recitations are still absent.

Point 5

MPEP § 2143.02 states:

The prior art can be modified or combined to reject claims as prima facie obvious as long as there is a **reasonable expectation of success**.

MPEP § 706.02(j) states:

. . .

To establish a prima facie case of obviousness, three basic criteria must be met.
. . .
Second, there must be a **reasonable expectation of success**.
. . .
The . . . reasonable expectation of success must . . . be found in the prior art and not based on applicant's disclosure.

As explained above, the PTO has not shown several elements of claim 1 in the prior art, but has summarily concluded that it is obvious to extend Shima to include some of those elements.

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Thus, the PTO has not actually shown all elements of claim 1 in the prior art. Consequently, no expectation of success has been shown, since the entirety of claim 1 has not been shown.

That is, since the entirety of claim 1 has not been actually shown in the prior art, no expectation of success has been given that the entire claim 1 will be attained in the prior art, even if combined.

Point 6

No teaching has been given in favor of the modification of Shima.

Sub-Point 6A

The rationale given asserts that it is obvious to add a "browser" to Shima. But, as just explained, an expectation of success is required.

When you add that "browser," what does the browser browse through ? That is, in Shima, what does the browser look at ?

Until that question is answered, no expectation of success has been shown.

Sub-Point 6B

The rationale asserts that it is obvious to also add "pages" to Shima. Where is the expectation of success ?

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That is, what is the content of the pages ? Until that question is answered, no expectation of success has been shown.

Sub-Point 6C

The PTO, in essence, asserts that it is obvious to add a "browser" and "pages" to Shima, because Shima shows a "networked system."

However, if Shima shows a "network" (and that is doubtful), that is not the type of network that a browser uses. For example, Shima's Figure 1 shows

> a computer 14,
>
> a VCR 12,
>
> a video camera 10,
>
> a compact disc (CD) changer 20,
>
> a set-top box (STB) 13, and
>
> a television 11.

He shows cables 15, 16, 18, and 19 connecting some of those elements together.

Applicant asks, how would a "browser" be added to those elements ? The only element on which a "browser" can run is the computer 14. Assume arguendo that a "browser" is installed on that computer 14.

> -- How does it "browse" the television 11 ?
>
> -- How does it "browse" the STB 13 ?

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-- How does it "browse" the CD changer 20 ?

-- How does it "browse" the VCR 12 ?

The answer to all questions is "It cannot."

Thus, no expectation of success has been shown.

Point 7

Claim 1 recites:

> a plurality of pages are defined in a
> mark-up language that are selectively
> displayed and executed by a controlled
> browser.

Applicant points out that the PTO relies on Shima's "controller" 13 in his Figure 1 to generate the claimed displays. However, Applicant can find no "browser" in Shima, and requests, under 37 CFR § 1.104(c)(2) and 35 U.S.C. § 132, that the PTO specifically identify the "browser" in Shima.

In this connection, Applicant points out that Shima does not appear to surf the Internet, so what would be the purpose of Shima using a browser ?

In addition, Applicant points out that the claim states that "pages" are displayed in a "mark-up language." Applicant cannot find that in Shima, and requests that the "pages" and the "mark-up language" be identified.

Applicant further points out that, ordinarily, for a "browser"

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to display "pages" in a "mark-up language," a specific computer architecture is required. For example, the browser known as "Internet Explorer" and sold by Microsoft, requires a version of Windows, and a specific type of computer architecture, namely, the so-called PC architecture, which is believed to be a type of von-Neumann architecture.

Shima, Figure 2, shows the architecture of his controller 13, which he calls a "set top box" STB. There is no indication that this controller can run a standard "browser." There is no indication that this controller contains a PC architecture. Thus, the claimed browser is absent from Shima.

Point 8

Claim 1 recites:

> at least one of said pages includes a page embedded control object configured to call said passthrough object.

This cannot be found in Shima, for the following reasons.

The PTO finds the "pages" of claim 1 (which are defined in a "mark-up language") in the "panel subunits" of Shima, Figure 9, blocks 712 and 714. That is, the representations in Shima of the control panels, discussed above, of the various electronic components to be controlled are said to be the "pages" if claim 1.

That is impossible, as will now be explained.

One reason is that the passage of claim 1 given above states that an "object" in the "page" calls "the passthrough object." (For example, if the customer at an ATM wants to withdraw $ 100, the customer will hit a button, or enter a number, indicating $ 100. That action will trigger code, an object, to call the "passthrough object." The "passthrough object" relays the request to the dispensing system.)

That cannot occur in Shima because, under the PTO's reading of Shima, Shima's "panel subunit" calls itself, which makes no sense. That is,

-- The PTO treats Shima's "panel subunit" as the "pages" of claim 1;

-- The PTO also treats Shima's "panel subunit" as the "passthrough object" of claim 1;

but

-- Claim 1 states that the "pages" call "objects" which pass calls to the "passthrough unit."

Thus, under the PTO's interpretation, Shima's "panel subunit" contains "objects" which pass calls to the "panel subunit." According to the PTO, Shima's "panel subunit" passes calls to itself. That cannot be so.

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<u>Conclusion as to Claim 1</u>

For the preceding reasons, Applicant submits that claim 1 is not obvious, based on Shima.

The preceding reasons apply to all other claims, some of which are discussed individually below.

Claims 2 and 3

Claim 2 refers to a "self-service terminal," SST. Applicant requests that this SST be specifically identified in Shima.

Applicant also points out that SSTs are contained in public places, and are used by the general public. In contrast, Shima refers to a home theater system. (Column 1.) He does not show a public place.

Claim 3 depends from claim 2, and recites "wherein said self service terminal dispenses money and facilitates financial transactions." That has not been shown in Shima.

The PTO, bottom of page 4, asserts that Shima "**can** also include and ATM." That is insufficient as a rejection. MPEP § 2143.01 states:

> FACT THAT REFERENCES **CAN BE** COMBINED OR MODIFIED IS NOT SUFFICIENT TO ESTABLISH PRIMA FACIE OBVIOUSNESS
>
> The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.

. . .

> FACT THAT THE CLAIMED INVENTION IS WITHIN THE
> CAPABILITIES OF ONE OF ORDINARY SKILL IN THE
> ART IS NOT SUFFICIENT BY ITSELF TO ESTABLISH
> PRIMA FACIE OBVIOUSNESS
>
> A statement that modifications of the prior
> art to meet the claimed invention would have
> been "well within the ordinary skill of the
> art at the time the claimed invention was
> made" because the references relied upon teach
> that all aspects of the claimed invention were
> individually known in the art is not
> sufficient to establish a prima facie case of
> obviousness without some objective reason to
> combine the teachings of the references.

Thus, the fact that Shima **could** be modified to include an ATM
is not allowed as a basis for rejection by these MPEP sections.

Further, why would somebody put an ATM in Shima's environment,
which is a living room of a home ?

In addition, the ATM used to reject claim 3 has not been shown
in the prior art, contrary to MPEP § 2143.03.

Claim 5

Claim 5 recites:

> 5.   Apparatus according to claim 1,
> wherein said passthrough object is a separate
> process executed under the control of an
> operating system.

The PTO relies on the "panel subunits" of Shima to show the

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claimed "passthrough object." However, as explained above, those "subunits" involve multiple elements, both software and hardware. For example, the left side of Shima's Figure 13A shows a "panel subunit," containing hardware and included software.

That hardware/software does not correspond to the "passthrough object" of claim 5.

Claim 6

The rejection of claim 6 asserts that the mere presence of one single supposed "passthrough object" in Shima shows claim 6. That is not so.

Claim 6 recites an examination step, to determine whether such an object already exists. Shima does not perform that step.

Claim 8

Claim 8 states "wherein return events are returned to an initiating page via said passthrough object." The "return events" are, for example, generated by the "desired call to a specified operational object" of claim 1.

Column 22, lines 19 - 24, of Shima could conceivably show part of claim 8. That passage states that the VCR generates a channel number which is displayed on the TV. That may be a "return event."

However, claim 8 states that the "events" are returned to "an initiating page via said passthrough object." Applicant requests

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that the "initiating page" be identified in Shima, and the passage

of the "return event" through the "passthrough object" en route to

that "initiating page."

Claim 9

The "register" of claim 9 has not been identified in Shima.

Claims 10 and 11

Dependent claim 10 states:

> . . . wherein said passthrough object includes
> a buffer for buffering events to be returned
> to pages that are no long established within
> the process.

That is, claim 10 states that, when some pages are no longer

established, the buffer holds events for those pages.

Applicant requests that those pages, and the buffering, be

identified in Shima.

This applies to claim 11.

Claim 21

Claim 21 recites a computer-readable medium which contains

instructions which perform specific functions.

That has not been shown in Shima. Shima's overall system does

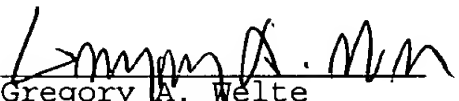not correspond to such a "medium," even if his system does perform

all the claimed functions, which is not so.

CONCLUSION

Applicant requests that the rejections to the claims be reconsidered and withdrawn.

Applicant expresses thanks to the Examiner for the careful consideration given to this case.

Respectfully   submitted,

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ATTACHMENT: Complete listing of all claims